METHOD AND APPARATUS FOR ASSAYING A DRUG CANDIDATE TO ESTIMATE A PHARMACOKINETIC PARAMETER ASSOCIATED THEREWITH

ABSTRACT OF THE DISCLOSURE

A method and apparatus for assaying a drug candidate with a biosensor having one or more sensing surface-bound biomolecules associated therewith are disclosed. The method comprises the steps of measuring the binding interaction between the drug candidate and the one or more sensing surface-bound biomolecules of the biosensor to obtain an estimate of at least one binding interaction parameter of the drug candidate, and then comparing the estimated binding interaction parameter against a mathematical expression correlated from binding interaction data associated with known drug compounds to determine an estimate of at least pharmacokinetic parameter of absorption, distribution, metabolism, or excretion (ADME) that is related to the drug candidate. The present invention allows for the simultaneous measurement of different pharmacokinetic parameters of the drug candidate, as well as an indication of the drug candidate's solubility, by use of a single analytical instrument. The pharmacokinetic data may be represented as a ADME characterization profile; such ADME profiles are of great utility for purposes of drug screening and lead optimization.